

Artificial Intelligence in Utilitarian vs. Hedonic Contexts: The “Word-of-Machine” Effect

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Abstract

Rapid development and adoption of AI, machine learning, and natural language processing applications challenge managers and policy makers to harness these transformative technologies. In this context, the authors provide evidence of a novel “word-of-machine” effect, the phenomenon by which utilitarian/hedonic attribute trade-offs determine preference for, or resistance to, AI-based recommendations compared with traditional word of mouth, or human-based recommendations. The word-of-machine effect stems from a lay belief that AI recommenders are more competent than human recommenders in the utilitarian realm and less competent than human recommenders in the hedonic realm. As a consequence, importance or salience of utilitarian attributes determine preference for AI recommenders over human ones, and importance or salience of hedonic attributes determine resistance to AI recommenders over human ones (Studies 1–4). The word-of-machine effect is robust to attribute complexity, number of options considered, and transaction costs. The word-of-machine effect reverses for utilitarian goals if a recommendation needs matching to a person’s unique preferences (Study 5) and is eliminated in the case of human–AI hybrid decision making (i.e., augmented rather than artificial intelligence; Study 6). An intervention based on the consider-the-opposite protocol attenuates the word-of-machine effect (Studies 7a–b).